26. SUBSTANCE ABUSE

Number	Objective
1	Motor vehicle crashes
2	Cirrhosis deaths
3	Drug-related deaths
4	Drug abuse-related emergency department visits
5	Drug-free youth
6	Adolescent use of illicit substances
7	Binge drinking
8	Riding with a driver who has been drinking
9	Alcohol consumption
10	Steroid use
11	Inhalant use
12	Alcohol and drug-related violence
13	Alcohol-related drownings
14	Peer disapproval of substance abuse
15	Perception of risk associated with substance abuse
16	Treatment gap for illicit drugs
17	Treatment gap for problem alcohol use
18	Services for school-aged children
19	Screening and treatment of patients 60 and older
20	Lost productivity
21	Community partnerships and coalitions
22	Administrative License Revocation laws
23	Blood alcohol concentration levels

Substance Abuse

Goal

Reduce substance abuse and thereby protect the health, safety, and quality of life of all Americans, especially the Nation's children.

Terminology

(A listing of all acronyms used in this publication appears on page 27 of the Introduction.)

Alcohol abuse: A maladaptive pattern of alcohol use leading to clinically significant impairment or distress manifested by three or more of the following in a 12-month period: alcohol use that interferes with the ability to fulfill major role obligations; alcohol use in situations that are physically hazardous; recurrent, alcohol-related legal problems; continued alcohol use despite adverse social or interpersonal consequences; and persistent desire or unsuccessful efforts to cut down.

Alcohol dependence: A maladaptive pattern of alcohol use, leading to clinically significant impairment or distress, as manifested by one or more of the seven conditions in a 12-month period, including the following: tolerance, withdrawal, impaired control over drinking; preoccupation with alcohol; less time spent on important social, occupational, or recreational activities; use of alcohol despite adverse physical or psychological consequences; and persistent desire or unsuccessful efforts to cut down.[1]

Binge drinking: Drinking 5 or more drinks on the same occasion on at least 1 day in the past 30 days.

Blood alcohol concentration: The amount of alcohol in the bloodstream. It is measured in percentages. For example, having a BAC of 0.10 percent means that a person has 1 part alcohol per 1,000 parts blood in the body.

Co-occurring disorders: The simultaneous presence of two or more disorders. In this document, the term describes the coexistence of a mental health disorder and substance abuse problems.

Hepatitis B and C: Hepatitis is an inflammation of the liver. Hepatitis B and C are viral infections spread through contact with infected blood products, use of IV drugs, and needle sharing.

Indicated preventive interventions: Targeted to high-risk individuals who are identified as having minimal but detectable signs or symptoms foreshadowing substance abuse, or biological or familial markers indicating predisposition for substance abuse, even though they do not meet DSM-III-R diagnostic levels at the current time.

Injection drug use: The use of a needle and syringe to inject illicit drugs, e.g., heroin, which places the user at great risk for contracting HIV.

Selective preventive interventions: Targeted to individuals or a subgroup of the population whose risk of developing substance abuse is significantly higher than average. The risk may be imminent or it may be a lifetime risk. The basis may be biological, psychological, or environmental.

Substance abuse: The problematic consumption or illicit use of alcoholic beverages, tobacco products, and drugs, including misuse of prescription drugs.

Universal preventive interventions: Targeted to the general public or a whole population group that has not been identified on the basis of individual risk. The intervention is desirable for everyone in that group. Universal interventions have advantages in terms of cost and overall effectiveness for large populations.

Overview

Substance abuse and substance abuse-related problems are among society's most pervasive health and social concerns. Some 100,000 people die each year in the United States as a result of alcohol alone. In addition, illicit drug abuse and related acquired immunodeficiency syndrome (AIDS) deaths account for at least another 12,000 deaths. It costs every man, woman, and child in America nearly $1,000 annually to cover the costs of health care, law enforcement, motor vehicle crashes, crime, and lost productivity due to substance abuse.[1a]

Substance abuse, including tobacco use and nicotine dependence, is associated with a variety of other serious health and social problems as well. An analysis of the epidemiological evidence reveals that 72 conditions requiring hospitalizations are wholly or partially attributable to substance abuse.[1b] Tobacco products are related to approximately one-third of all cancer deaths in the United States (see Tobacco Use chapter). Substance abuse has also been identified as a contributor to cancers that until recently were thought to be unrelated. Some research, for example, has identified tobacco exposure as a potential risk factor for breast cancer.[2] In addition, tobacco, alcohol, and illicit drug use increase the risk for heart disease, stroke, and hypertension. Heavy alcohol use increases the risk for hepatitis B and C, cirrhosis, and other liver disorders.[3]

Not everyone chooses to drink alcohol, and of those who do, most have little or no trouble limiting their intake to amounts that produce no serious health or social consequences.[4] Millions of other Americans, however, consume alcohol in quantities and at frequencies that place them and others at risk for alcohol-related disease, unintentional injuries, and crime. People who drink even relatively low amounts of alcoholic beverages contribute to alcohol-related death and injury in occupational incidents and if they drink before operating a vehicle.[5] Alcohol use is associated with more than 45 percent of all motor vehicle crash fatalities, a significantly lower percentage than was observed in the 1980s.[6] Available data indicate that roughly one-third of victims of homicide and suicide and 22 percent of victims of fatal boating accidents were intoxicated at the time of death.[7] In addition, the triggering effect of alcoholic beverage consumption in sexual assault and victimization has been documented by both experimental and population-based research since the late 1970s (for example, see Room, 1982).

The population aged 60 and older also faces risks for alcohol-related problems, although this population group generally consumes comparatively low amounts of alcoholic beverages.[8] Adverse alcohol-drug interaction can be a major problem that causes hospital admissions among older patients, since many older patients take multiple medications.[9] In addition, many cases of memory deficits and dementia now are understood to result from the effects of alcoholism.[10]

The abuse of illicit drugs has had a profound impact on the Nation's health. The relationship between injection drug use and HIV/AIDS transmission is well known. Injection drug use also is associated with hepatitis B and C infection.[11] The use of cocaine, nitrites, and other substances can produce cardiac irregularities and heart failure, convulsions, and seizures. Cocaine use temporarily narrows blood vessels in the brain, contributing to the risk of strokes (bleeding within the brain) as well as to cognitive and memory deficits.[12] Long-term consequences such as chronic depression, sexual dysfunction, and psychosis may result from drug use.

Advances in research techniques over the past 20 years, including advanced brain imaging and the study of the effects of alcohol and drug abuse on individual cells, have helped to document the alteration of healthy systems by all forms of substance abuse, including the use of marijuana. Researchers supported by the National Institutes of Health have identified lasting damage inflicted on the brain and nervous system by the use of drugs, including changes in nerve cell structure associated with alcohol and drug dependence. Other research has focused on the long-term effects of alcohol and drug abuse on the immune system and on the effects of prenatal alcohol and drug exposure on the behavior and development of children.

Research has confirmed that a substantial number of frequent users of cocaine, heroin, and illicit drugs other than marijuana have chronic mental health disorders that co-occur with their drug use. Studies have found that some of these individuals can be identified by their behavior problems at the time of their entry into elementary school.[13] Such youth tend to use substances at a young age and exhibit sensation-seeking (or "novelty-seeking") behaviors.[14] Members of this population benefit from more intensive preventive interventions, including programs that include family therapy and parent training.[16,17]

Older adolescents and adults with co-occurring substance abuse and mental health disorders need explicit and appropriate treatment for their disorders. However, those who suffer from co-occurring disorders are frequently turned away from treatment designed for one or the other problem, but not designed for both. (See the Mental Health and Mental Disorders chapter for objectives and further discussion of this issue).

The larger population of substance abusers consists of individuals who generally initiate the use of alcohol and tobacco during or after adolescence, followed by progression to alcohol abuse or illicit drug use. Although less susceptible to drug dependence than the early-onset users, members of this later-onset group include millions of Americans who suffer from the adverse health, social, and legal consequences of their substance abuse. The behavior of this group of substance abusers can be influenced by changes in policies and laws affecting access to tobacco, alcohol, and drugs and by preventive interventions that alter their susceptibility to peer pressure, expectations, and norms regarding substance use.[18]

The stigma attached to substance abuse increases the severity of the problem. The desire to keep their substance abuse confidential, for example, can prevent people from seeking and continuing treatment and from having a productive attitude toward treatment.

Substance abuse affects all racial, cultural, and economic groups. Use rates for an array of substances (as measured by the 1996 National Household Survey on Drug Abuse) reveal the following:

- Among young people 12 to 17 years old, whites and Hispanics are more likely than African Americans to use alcohol.

- Among 12- to 17-year-olds, whites are more likely to use tobacco and illicit drugs than African Americans and Hispanics.

- Alcohol is by far the most commonly used substance regardless of race or ethnicity. Far more people smoke tobacco (in the form of cigarettes) than use any illicit drug.

Substance Use in the Last Year

	White		Hispanic		African American	
	All Ages	**12 - 17**	**All Ages**	**12 - 17**	**All Ages**	**12 - 17**
Alcohol	*	34.4%	*	34.6%	*	26.6%
Cigarettes	33.3%	27.4%	28.6%	20.1%	32.9%	16.7%
Any illicit drug	10.8%	17.1%	9.6%	16.5%	13.4%	15.9%
Marijuana	8.6%	13.3%	7.0%	13.0%	11.1%	13.0%
Cocaine	1.7%	1.3%	2.4%	2.0%	2.4%	0.6%
Inhalants	1.3%	4.9%	0.7%	2.8%	0.5%	0.8%
Heroin	0.2%	*	0.2%	*	0.2%	*

* Not available

Source: National Household Survey on Drug Abuse: Population Estimates 1996, SAMHSA.

The prevention and treatment of substance abuse requires that all abused substances be addressed—from tobacco and alcohol to marijuana and other illicit drugs. Tobacco prevention and treatment, for example, is an equally important part of a comprehensive substance abuse prevention program, although all objectives for tobacco are listed in the Tobacco Use chapter. That chapter includes objectives that bear on this chapter, on increasing the age of first use of tobacco, reducing past month use, increasing the number of high school seniors reporting they have never used tobacco, and increasing the percentage of young people perceiving harm and social disapproval of tobacco use.

Substance abuse does not occur in a vacuum. To reduce substance abuse, substance abuse prevention and treatment are necessary. Also needed are access to those services; culturally, linguistically, and age-appropriate approaches; job training and employment; parenting training; general education; and the elements of a healthy life. More behavioral research is needed, as are programs for women and dually diagnosed patients. Government, the faith community, and other organizations in the private and nonprofit sectors must increase their level of cooperation and coordination to ensure that multiple service needs are met.

Progress Toward Year 2000 Objectives

Results in the substance abuse priority area of Healthy People 2000 are mixed. Targets have been met or exceeded for cirrhosis deaths (4.2), steroid use (4.11), access to treatment programs (4.12), and worksite alcohol and drug policies (4.14). Progress toward targets is shown for motor vehicle deaths (4.1), past month use by adolescents (4.6), alcohol consumption (4.8), alcohol and drug education in schools (4.13), administrative license revocation laws (4.15), policies related to minors (4.16), blood alcohol tolerance levels (4.18), and screening, counseling, and referral by clinicians (4.19). The following have moved away from their target: drug-related deaths (4.3), heavy drinking in past 2 weeks (4.7), drug abuse-related emergency room visits (4.4), average age of first use (4.5), perceived social disapproval by high school seniors (4.9), perception of harm by high school seniors (4.10), number of States with restrictions on the promotion of alcohol to adolescents (4.17), and number of States with hospitality resource panels (4.20). To achieve continued progress, vigilance is necessary to successfully address the patterns of substance abuse presented by emerging groups of young people and the introduction of new drugs. A summary of the highlights of our progress toward the objectives is presented below.

- Alcohol-related motor vehicle deaths per 100,000 (objective 4.1) declined from 8.9 in 1990 to 6.4 in 1994; the rate has held steady at 6.5 in both 1995 and 1996 (target 5.5 per 100,000).

- Cirrhosis deaths (objective 4.2) declined for the total population since the 1987 baseline of 9.2; in 1995, the rate was 7.6 deaths per 100,000 (target 6.0 per 100,000).

- Drug-related deaths (objective 4.3) increased from 3.6 per 100,000 in 1990 to 3.8 in 1991, 4.3 in 1992, 4.8 in 1993, 5.0 in 1994, and 5.1 per 100,000 in 1995 (target 3.0 per 100,000).

- Drug abuse-related emergency room visits (objective 4.4) increased from 175.8 per 100,000 population in 1991 to 207 per 100,000 in 1996 (target 140.6 per 100,000). It should be noted that this increase may represent an increase in the utilization of hospital emergency departments by drug abusers; this measure is not just an indication of drug prevalence but also of utilization of health care resources.[20]

- Use in the past month by adolescents and young adults 12 to 17 years old (objective 4.6) declined for some substances and increased for others since 1994: use of **alcohol** declined from 21.6 percent to 18.8 percent in 1995 (target 12.6 percent); **marijuana** use rose from 6.0 percent in 1994 to 8.2 percent in 1995 and declined to 7.1 percent in 1996 (target 3.2 percent); **cocaine** use rose from 0.3 percent in 1994 to 0.8 percent in 1995 and declined to 0.6 percent in 1996, meeting the Healthy People 2000 target of 0.6 percent; **cigarette** use rose from 18.9 percent in 1994 to 20 percent in 1995 and declined to 18.3 percent in 1996 (target 6 percent). No data were available for 18- to 20-year-olds.

- Heavy drinking in past 2 weeks by high school seniors and college students (objective 4.7) remained relatively stable in 1995: 30 percent of seniors report heavy drinking, nearing the 28 percent target; 40 percent of college students report heavy drinking (the target was 32 percent).

- Perception of social disapproval by high school seniors (objective 4.9) has fluctuated since 1992 and has moved away from the Healthy People 2000 target: **heavy use of alcohol,** 60.8 percent in 1992 to 58.5 percent in 1993 to 59.1 percent in 1994 to 58.0 percent in 1995 (target 70 percent); **occasional use of marijuana,** 79.2 percent in 1992 to 73.8 percent in 1993 to 69.1 percent in 1994 to 65.4 percent in 1995 (target 85 percent); **trying cocaine once or twice,** 92.2 percent in 1992 to 91.1 percent in 1993 to 91.4 percent in 1994 to 91.1 percent in 1995 (target 95 percent); **smoking one or more packs of cigarettes per day,** 76.2 percent in 1992 to 71.8 percent in 1993 to 72.4 percent in 1994 to 69.2 percent in 1995 (target 95 percent).

- In 1995, the perception of harm by high school seniors (objective 4.10) from **heavy use of alcohol** declined slightly to 45.2 percent, moving away from the target of 70 percent. The perception of harm **for regular use of marijuana** declined nearly 5 percent to 60.8 percent, moving away from the 90 percent target. The perception of harm from **trying cocaine once or twice** fell 4 percent to 53.7 percent, moving away from the 80 percent Healthy People 2000 target. For **smoking one or more packs of cigarettes per day**, perception of harm fell to 65.6 percent, away from the 95 percent target. Perceived harm in using **smokeless tobacco regularly** fell over 3 percent to 33.2 percent, away from the 95 percent target.

- In 1997, steroid use by high school seniors (objective 4.11) was 2.5 percent, better than the target of 3 percent.

- According to Substance Abuse Prevention and Treatment (SAPT) Block Grant applications, objective 4.12 (establish and monitor in 50 States comprehensive plans to ensure access to alcohol and drug treatment programs for traditionally underserved people) is now measurable and all States report access to treatment.

- Data for 1995 for objective 4.14 (worksite alcohol and drug policies) showed that 92 percent of worksites with 50 or more employees had policies for alcohol and 96 percent for other drugs, exceeding the Healthy People 2000 target of 60 percent.

Draft 2010 Objectives

1. (Former 4.1) Reduce deaths and injuries caused by alcohol and drug-related motor vehicle crashes.

1a. Decrease alcohol-related motor vehicle crash deaths to 2.9 per 100,000 population. (Baseline: 6.5 per 100,000 in 1996)

Select Populations	1994 (unless not noted)
African American	6.2
American Indian/Alaska Native	28.0
Asian/Pacific Islander	19.6
Hispanic	Not available
White	6.2
Male	10.1 (1996)
Female	3.0 (1996)
People aged 15-24	12.9 (1996)

Target Setting Method: Based on the Department of Transportation's *Partners in Progress Report,* which calls for no more than 11,000 deaths by the year 2000.

Data Source: Fatality Analysis Reporting System (FARS), Department of Transportation.

1b. Decrease alcohol-related motor vehicle injuries to 65 per 100,000 population. (Baseline: 121 per 100,000 in 1996)

Target Setting Method: 46 percent improvement.

Data Source: General Estimates System (GES), Department of Transportation.

1c. (Developmental) Decrease drug-related motor vehicle crash deaths.

1d. (Developmental) Decrease drug-related motor vehicle injuries.

Fatal injuries caused by crashes resulting from operating a vehicle under the influence of alcohol or drugs remain a serious problem in the United States, although progress has been achieved in reducing the rate of alcohol-related driving fatalities. The rate declined from 9.8 deaths per 100,000 in 1987 to 6.5 per 100,000 in 1996. Of particular concern is the rate among Native Americans and 15- to 24-year-olds, whose rates are significantly higher than that of other population groups. In 1994, the alcohol involvement rate in fatal traffic crashes for American Indian/Alaska Native males was 4 times higher (28 per 100,000 population) than for the general population. For 15- to 24-year-olds, the rate was 12.9 per 100,000 population (1996). It should also be noted that even at current rates, about 3 in every 10 Americans will be involved in an alcohol-related crash sometime in their lives. The alcohol-related traffic fatality rate for youth, however, has decreased by over 50 percent since 1982, from 22 to 10 deaths per 100,000 people in

1996.[21] The National Highway Traffic Safety Administration (NHTSA) estimates that since 1975, over 16,500 lives have been saved by minimum drinking age laws.

Alcohol and drug-related traffic crashes often claim children as victims. In 1996, 2,716 children under the age of 15 were killed in traffic crashes. Nearly 21 percent of these children were killed in alcohol-related crashes. Of the children killed in alcohol-related crashes, nearly half (259) were passengers in vehicles with drivers who had been drinking.[22]

Crash-related injuries are also a serious problem. While motor vehicle crashes cause many deaths, many people also are seriously injured and permanently disabled. In 1996, crash-related injuries totaled 3,511,000 compared to deaths of 41,907.[23]

Our goal, therefore, is to reduce the incidence of all injuries resulting from alcohol and drug-related driving. Such injuries make significant contributions to emergency room usage and health care costs in general and result in personal tragedies for families devastated by death or permanent disability.

The Healthy People 2010 tracking system should include drug-related fatalities and injuries, as well as alcohol-related fatalities and injuries. This extension will promote understanding of the seriousness of the problem of driving under the influence of drugs and will encourage steps to reduce such drug-related fatalities. (Note: Alcohol has been studied more extensively than other substances with respect to motor vehicle crashes.)

2. Reduce cirrhosis deaths to 2.6 per 100,000. (Age-adjusted baseline: 7.6 per 100,000 in 1996)

Select Populations	**1996**
African American	9.9
American Indian/Alaska Native	24.3
Asian/Pacific Islander	2.7
Hispanic	12.9
White	7.4
Male	11.0
Female	4.6

Target Setting Method: Better than the best.

Data Source: National Vital Statistics System (NVSS), CDC, NCHS.

Sustained heavy alcohol consumption is the leading cause of cirrhosis, one of the 12 leading causes of death in the United States.[24-27] Cirrhosis occurs when healthy liver tissue is replaced with scarred tissue until the liver is unable to function effectively. Changes in alcohol consumption patterns over time are associated with changes in the death rate from cirrhosis; however, improvements in disease management and in the availability of treatment for alcoholism may also have contributed to a decline in cirrhosis deaths since 1973.

3. Reduce drug-related deaths to 1.3 per 100,000. (Age-adjusted baseline: 4.7 in 1996)

Select Populations	1996
African American	8.5
American Indian/Alaska Native	5.0
Asian/Pacific Islander	1.4
Hispanic	6.0
White	4.8
Male	7.3
Female	3.0

Target Setting Method: Better than the best.

Data Source: National Vital Statistics System (NVSS), CDC, NCHS.

Drug-related deaths are an important indicator of the damaging effects of drugs on health. Causes of death that are classified as drug-related include drug psychosis, drug dependence, suicide, and intentional and unintentional poisoning that result from illicit use of drugs. Declining initiation, prevalence, and intensity of drug abuse should be reflected in fewer drug-related deaths, although the prevention of suicide, accidental poisoning, and fatal interaction among medications also contributes to changes in the statistic measured in this objective.

4. Reduce drug abuse-related hospital emergency department visits to 350,000 per year. (Estimated baseline: 487,600 in 1996)

Target Setting Method: 72 percent improvement.

Data Source: Drug Abuse Warning Network (DAWN), SAMHSA.

Drug-related emergency department visits are another major indicator of the harmful effects of drugs. The Drug Abuse Warning Network (DAWN) monitors drug-related hospital emergency department episodes in 21 metropolitan areas and a national sample of hospitals outside the metropolitan areas. DAWN gathers data from a nationally representative sample of 508 non-Federal, short-stay general hospitals with 24-hour emergency departments. Data are weighted to produce national estimates.

In hospital emergency departments, a "drug-related episode" is defined as one resulting from the nonmedical use of a drug. Nonmedical drug use includes the unprescribed use of prescription drugs, the use of drugs contrary to approved labeling, and the use of illicit drugs. Episodes in hospital emergency departments (ED) are abstracted from medical records by hospital staff or hired clerks. To be included in DAWN, the ED patient must be aged 6 or older and meet four criteria: the patient was treated in the hospital's ED; the presenting problem was induced by or related to drug use; the case involved the nonmedical use of a legal drug or any use of an illegal drug; and the patient's reason for taking the substance (s) included one of the following: (1) dependence, (2) suicide attempt or gesture, or (3) psychic effects.

In 1996, according to DAWN analyses, "suicide attempt or gesture" was the most commonly reported motive for taking a substance that resulted in an emergency department episode (37 percent of all episodes). "Dependence" was reported as the motive in 33 percent of drug-related episodes.[28] In addition, 27 percent of drug-related episodes reported in DAWN occurred among persons aged 26 to 34 years old

and 41 percent among persons aged 35 years and older. Whites accounted for 54 percent of drug-related emergency department episodes, African Americans accounted for 27 percent, and Hispanic Americans accounted for 10 percent.[29]

5. Increase the percentage of youth who remain alcohol and drug free.

5a. (Former 4.5) Increase by at least 1 year the average age of first use of alcohol and marijuana by adolescents aged 12 through 17. (Baseline: age 13.1 for alcohol; 14.4 for marijuana in 1996) (See Tobacco Use chapter for objective on age of first use of tobacco products)

Target Setting Method: Consistent with ONDCP.

Data Source: National Household Survey on Drug Abuse (NHSDA), SAMHSA.

5b. Increase to 24 percent the proportion of high school seniors reporting they have never used alcoholic beverages. (Baseline: 18.3 percent in 1997)

Select Populations	1996-97
African American	27.9%
American Indian/Alaska Native	Not available
Asian/Pacific Islander	Not available
Hispanic	19.5%
White	17.3%

Target Setting Method: Better than the best

Data Source: Monitoring the Future Survey, NIH, NIDA.*

* Once data from the expanded NHSDA are available in the year 2001, the data source for this objective will be reexamined.

5c. Increase to 59 percent the proportion of high school seniors reporting they have never used any illicit drug. (Baseline: 45.7 percent in 1997) (See Tobacco Use chapter for objective on percentage of high school seniors who report they have never used tobacco.)

Select Populations	1996-97
African American	55.4%
American Indian/Alaska Native	Not available
Asian/Pacific Islander	Not available
Hispanic	44.0%
White	46.3%

Target Setting Method: Better than the best.

Data Source: Monitoring the Future Survey, NIH, NIDA.

An important goal of U.S. policy for the prevention of substance abuse among youth is to increase the percentage of young people who reach adulthood without using tobacco, illicit drugs, or alcohol. Strengthening the ability of children and teenagers to reject all such substances can be an important and

critical element in prevention activities because the required skills and attitudes can carry over into adulthood, long after family constraints and other influences have lost their effectiveness.[30]

From 1985 until 1995, the percentage of high school seniors who reported they had never used tobacco, drugs, or alcohol increased dramatically.[31] This increase clearly demonstrates the value of the national investment in prevention because it followed many years of virtually no change in the percentage of high school seniors who reported they had never used alcohol or drugs. This objective tracks progress in increasing the percentage of youth who do not use alcohol or other drugs.

Local activities are important to achieving overall prevention goals. The best prevention approaches involve comprehensive, multistrategy prevention interventions. Comprehensive community-based programs include interventions that influence individual behavior and attitudes through education, for example, as well as interventions that change environments through controls on availability. Comprehensive programs must be applied universally to the general population as well as in a more intensive fashion to selected and indicated groups and individuals known to be at high risk for serious drug problems or to targeted groups of individuals already exhibiting the early signs of drug use. The need to sustain universal, selective, and indicated prevention efforts justifies coordination among schools, local government, business, the faith community, civic groups and other elements of the community.[32]

6. (Former 4.6) Reduce past month use of illicit substances among 12- to 17-year-old youth.

6a. Reduce to 14.5 percent the proportion of youth reporting use of alcoholic beverages during the past 30 days. (Baseline: 18.8 percent in 1996)

Select Populations	**1996**
African American	14.7%
American Indian/Alaska Native	Not available
Asian/Pacific Islander	Not available
Hispanic	19.9%
White	20.4%

6b. Reduce to 5.3 percent the proportion of youth reporting use of marijuana during the past 30 days. (Baseline: 7.1 percent in 1996)

Select Populations	**1996**
African American	7.3%
American Indian/Alaska Native	Not available
Asian/Pacific Islander	Not available
Hispanic	6.9%
White	7.3%

6c. Reduce to 5.8 percent the proportion of youth reporting use of any drugs during the past 30 days. (Baseline: 9 percent in 1996) (See Tobacco Use chapter for objective on past month use of tobacco.)

Select Populations	1996
African American	8.6%
American Indian/Alaska Native	Not available
Asian/Pacific Islander	Not available
Hispanic	9.2%
White	9.2%
Male	Not available
Female	Not available

Target Setting Method: The percentage reduction, as set under the Secretary's Initiative on Youth Substance Abuse Prevention, was applied to the 1996 baselines.

Data Source: National Household Survey on Drug Abuse (NHSDA), SAMHSA.

Goal 1 of the 1997 National Drug Control Strategy is to "educate and enable America's youth to reject illegal drugs as well as alcohol and tobacco."[33] In response to this goal, under the Secretary's Initiative on Youth Substance Abuse Prevention, specific targets for the reduction of drug use among 12- to 17-year-olds were established. These targets have a baseline of 1995 through the year 2002 (7 years). These targets are as follows:

- Reverse the upward trend and reduce past month use of marijuana among 12- to 17-year-olds by 25 percent (1995 baseline: 8.2 percent; goal: 6.2 percent in 2002).
- Reduce past month use of any illicit drugs among 12- to 17-year-olds by 35 percent (1995 baseline: 10.9 percent; goal: 7.1 percent in 2002).

- Reduce past month use of alcohol among 12- to 17-year-olds by 20 percent (1995 baseline: 21.1 percent; goal: 17 percent in 2002).

The targets of the Secretary's Initiative were used as the basis for identifying objectives for Healthy People 2010.

In 1979, the rate of drug use among youth was 16.3 percent. In 1992, it reached a low of 5.3 percent but in 1995, the rate of current use had increased to 10.9 percent. In 1996, the survey reported lower rates of current use for marijuana, cocaine, and alcoholic beverages.[35]

7. (Former 4.7) Reduce by one-third the estimated proportion of persons engaging in binge drinking of alcoholic beverages during the past 2 weeks.

7a. Reduce to 13 percent the proportion of high school seniors reporting binge drinking during the past 2 weeks. (Baseline: 30.2 percent in 1996)

Select Populations	1996
African American	13.4%
American Indian/Alaska Native	Not available
Asian/Pacific Islander	Not available
Hispanic	27.6%
White	35.1%
Male	Not available
Female	Not available

Target Setting Method: Better than the best.

Data Source: Monitoring the Future Survey, NIH, NIDA.

7b. Reduce to 20 percent the proportion of college students reporting binge drinking during the past 2 weeks. (Baseline: 38.3 percent in 1996)

Target Setting Method: 52 percent improvement.

Data Source: Monitoring the Future Survey, NIH, NIDA.

7c. Reduce to 18 percent the proportion of adults 18 to 25 years old reporting binge drinking during the past month. (Baseline: 32 percent in 1996)

Select Populations	1996
African American	18.8%
American Indian/Alaska Native	Not available
Asian/Pacific Islander	Not available
Hispanic	24.7%
Other	18.6%
White	37.0%
Male	Not available
Female	Not available

Target Setting Method: Better than the best.

Data Source: National Household Survey on Drug Abuse (NHSDA), SAMHSA.

7d. Reduce to 15 percent the proportion of adults 26 to 34 years old reporting binge drinking during the past month. (Baseline: 22.8 percent in 1996)

Select Populations	1996
African American	16.5%
American Indian/Alaska Native	Not available
Asian/Pacific Islander	Not available
Hispanic	20.1%
White	25.4%
Other	6.6%
Male	Not available
Female	Not available

Target Setting Method: Better than the best.

Data Source: National Household Survey on Drug Abuse (NHSDA), SAMHSA.

7e. Reduce to 3.6 percent the proportion of 12- to 17-year-olds reporting binge drinking during the past month. (Baseline: 7.2 percent in 1996)

Select Populations	1996
African American	3.7
American Indian/Alaska Native	Not available
Asian/Pacific Islander	Not available
Hispanic	8.3
White	8.0
Male	8.7
Female	5.6

Target Setting Method: Better than the best.

Data Source: National Household Survey on Drug Abuse (NHSDA), SAMHSA.

Virtually all major theories on the origins of adolescent substance abuse agree that the perceived acceptance of problematic drug-using behavior among family, peers, and society is an important influence on the individual's decision to use or avoid the use of alcohol, tobacco, and drugs. The perception that alcohol use is socially acceptable correlates with the fact that more than 80 percent of American youth consume alcohol before their 21st birthday, while the lack of social acceptance of other drugs correlates with comparatively lower rates of use. Similarly, widespread societal expectations that young people will engage in binge drinking may encourage this highly dangerous form of alcohol consumption.[36]

Passage of higher minimum purchase ages for alcoholic beverages during the mid 1980s reduced but did not eliminate underage drinking.[37] Many States are examining the use of additional restrictions and penalties for alcoholic beverage retailers to ensure compliance with the national minimum purchase age.

To address the problem of binge drinking and reduce access to alcohol by underage populations, several additional policies and strategies may be effective. Among them are the following:

- Tougher State restrictions and penalties for alcoholic beverage retailers to ensure compliance with the national minimum purchase age.

- Restrictions on the sale of alcoholic beverages at recreational facilities and entertainment events where youth constitute a majority of the participants or consumers.

- Improved enforcement of State laws prohibiting distribution of alcoholic beverages to anyone under 21 years old and more severe penalties to discourage distribution to underage populations. These policy changes avoid singling out retailers for special regulatory attention while noting that family members, friends, and coworkers may contribute to the problem of allowing access to alcoholic beverages by people under 21.

- Implementation of server training and standards for responsible hospitality. (Management and server training educates waitresses, waiters, bartenders, and supervisory staff on how to avoid serving alcohol to minors and to people who are intoxicated.) Studies have shown that management and server training and standards for responsible hospitality correlate with a reduction in alcohol intoxication by patrons.[38] In Oregon, a requirement for training since 1987 was associated with a 23 percent reduction in single-vehicle nighttime crashes.[39] States could require periodic server training or use the regulatory authority of alcohol distribution licensing to mandate a minimum level of training for individual servers. Another strategy might include having members of the hospitality industry within a State take the initiative to identify a set of standards and an appropriate course of training that will result in an industry-sponsored certification of a restaurant, bar, or other retail outlet as a "responsible" server.[40]

- Instituting a requirement that college students reporting to student health services following a binge drinking incident receive an alcohol assessment. An alcohol assessment would provide student health services with the data to evaluate the student's drinking and to refer the student to an appropriate intervention based on the student's overall drinking history. Instruments used to assess drinking histories include the CAGE questionnaire and the Michigan Alcohol Screening Test (MAST).

- Limiting advertisements and promotions aimed at underage populations who cannot legally purchase the products and restricting marketing to underage populations. Although most studies of the influence of alcohol advertising on overall consumption have found little or no effect,[41,42] this strategy may reduce the demand that results in illicit purchase or binge consumption.[43]

8. Reduce to 30 percent the number of young people in grades 9 through 12 who reported that they rode, during the previous 30 days, with a driver who had been drinking alcohol. (Baseline: 39 percent in 1995)

Select Populations	1995
African American	37.1%
American Indian/Alaska Native	Not available
Asian/Pacific Islander	Not available
Hispanic	49.4%
White	37.7%
Male	39.5%
Female	37.8%

Target Setting Method: Better than the best.

Data Source: Youth Risk Behavior Survey (YRBS), CDC, NCCDPHP.

Health risk behaviors that contribute to the leading causes of mortality, morbidity, and social problems among youth and adults often are established during youth, extend into adulthood, and are interrelated. In the United States, 72 percent of all deaths among school-aged youth and young adults result from four causes: motor vehicle crashes, other unintentional injuries, homicide, and suicide. Many high school students practice behaviors that may increase their likelihood of death from these four causes. A survey conducted by the Centers for Disease Control and Prevention (CDC) shows that 38.8 percent of students reported that they had ridden with a driver during the previous 30 days who had been drinking alcohol. The survey further shows that this is a particular problem for Hispanic students who are more likely than African American or white students to ride with a driver who had been drinking. Prevalence rates across State surveys ranged from 21.4 percent to 49.5 percent (median: 36.8 percent). Across the local surveys, the rates ranged from 20.6 percent to 46.3 percent (median: 32.7 percent).[44]

9. (Former 4.8) Reduce alcohol consumption to an annual average of no more than 2 gallons of ethanol per person. (Baseline: 2.21 in 1994)

Target Setting Method: Retain year 2000 target.

Data Source: Alcohol Epidemiology Data System, NIH, NIAAA.

Annual estimates of per capita consumption for the population aged 14 and over provide a valuable means for monitoring trends in U.S. alcohol consumption. These estimates are based on population figures as they relate to information on beverage sales, tax receipt data, or both. The data come primarily from States, with some data provided by beverage industry sources.

An overall downward trend in per capita alcohol consumption, after a peak in 1981 of 2.76 gallons, masks substantial differences in consumption trends for different types of alcoholic beverages. Per capita consumption of beer, wine, and distilled spirits declined during the past 10 years. The sharpest decline occurred for distilled spirits, down by more than 40 percent since its peak in the 1970s. The downward trend in alcohol consumption can be attributed to a variety of factors, including changing lifestyles and heightened awareness of the health and safety risks of excessive alcohol consumption.

Consumption of alcohol can be influenced by laws and regulations, particularly minimum drinking age laws and those that affect the price of alcoholic beverages. A research-based consensus maintains that higher prices are associated with lower levels of consumption even when other relevant determinants of economic demand for alcohol, such as income, remain constant. These inverse relationships hold for all

three beverage types (beer, wine, and distilled spirits). Therefore, the demand for alcoholic beverages appears to be affected by price changes in the same way as the demand for other consumer products. Studies of the effects of alcohol taxes on consumption lead to similar conclusions. However, recent research indicates that consumption by the upper 5 percent of drinkers is relatively unresponsive to changes in the price of beverage alcohol.[44a] This finding suggests that other prevention and treatment interventions must be used for this segment of the population.

An alternative approach to monitoring consumption goals is to track the number of people who drink at or below the levels proposed by the U.S. Dietary Guidelines (no more than two drinks per day for men and no more than one drink per day for women). Baseline data from the 1992 National Longitudinal Alcohol Epidemiologic Survey revealed that 86 percent of men and 91 percent of women (including nondrinkers) had average daily ethanol intake levels within these guidelines.[44b]

10. (Former 4.11) Reduce to 1 percent the estimated proportion of high school seniors who report use of steroids during the past year. (Baseline: 1.4 percent in 1997)

Select Populations	**1997**
African American*	1.5%
American Indian/Alaska Native	Not available
Asian/Pacific Islander	Not available
Hispanic*	1.6%
White*	1.2%
Male	2.5%
Female	0.5%

* Percentages are based on 1996 and 1997 data combined.

Target Setting Method: Better than the best.

Data Source: Monitoring the Future Survey, NIH, NIDA.

The increasingly sophisticated technology used to prepare for athletic competition has been a significant factor in the self-administration of so-called performance-enhancing substances and risky injection practices. These substances include steroids and over-the-counter stimulant drugs and herbs, with steroids the most common. Nonmedical use of steroids poses serious problems since use is both illegal and dangerous. Behavioral and health problems that have been noted with steroid use include suicides, homicides, liver damage, and heart attacks.

Many substance abuse researchers believe that attempts to enhance athletic performance with steroids and other substances reduce the perceived negative consequences of substance abuse and increase the likelihood of using illicit drugs for other purposes. In addition, limited access to needles and other equipment also results in a high rate of needle sharing among adolescent teammates who inject substances to enhance their performance. While steroid use by male athletes has attracted the most attention, current information suggests that adolescent females are increasing their use of steroids.[45]

11. Reduce to 0.7 percent the proportion of youth 12 to 17 years old who used inhalants during the past year. (Baseline: 4 percent in 1996)

Select Populations	**1996**
African American	0.8
American Indian/Alaska Native	Not available
Asian/Pacific Islander	Not available
Hispanic	2.8%
White	4.9%
Male	3.6%
Female	4.4%

Regions	**1996**
Northeast region	3.2%
North Central region	4.7%
South	3.8%
West	4.1%

Target Setting Method: Better than the best.

Data Source: National Household Survey on Drug Abuse (NHSDA), SAMHSA.

Since 1986, there has been a steep decline in annual use of amyl and butyl nitrites.[46] However, because the use of inhalants other than the nitrites has been increasing, overall inhalant use has stayed fairly level. Inhalant use continues to be a significant substance abuse behavior among young adolescents in rural areas of the West and Midwest. Native American youth often are at high risk for use of inhalants. For example, one tribe has been battling inhalant abuse for almost 25 years and, according to the National Inhalant Prevention Coalition, about 90 of the 450 registered members of this tribe are addicted to spray paint.

12. (Developmental) Decrease the number of intentional injuries resulting from alcohol and other drug-related violence.

Violence and abusive behavior related to substance abuse exacts a large toll on the physical and mental health of Americans. Child abuse, spousal abuse, and other forms of intra- and extrafamilial violence continue to threaten the health of thousands of American families. Violence and abusive behaviors are an important cause of injury-related death and long-term disability. A review of the literature found that the percentage of homicide offenders who were drinking when they committed the offense ranged from 7 to 85 percent, with most of the studies finding the figure greater than 60 percent.[47] Drugs, and most commonly alcohol, are also a factor in a significant number of firearm-related deaths.[48] The 1996 Drug Use Forecasting Report indicated that juvenile and adult arrestees testing positive for drugs had been frequently arrested for violent offenses such as robbery, assault, and weapons offenses. Two-thirds of victims who experienced violence by an intimate (a current or former spouse, boyfriend, or girlfriend) reported that alcohol had been involved. Among spousal victims, three out of four incidents involved an offender who was drinking. Thirty-one percent of strangers who were victimized believed that the offender was using alcohol (National Crime Victimization Survey, Department of Justice).

13. (Developmental) Reduce the percentage of persons who drown in boating accidents who were intoxicated at the time of death.

The average American may not be aware of the role alcohol use and abuse can play in the more than 1,000 deaths reported each year from recreational boating. Coast Guard studies however indicate that boat operators suffering from fatigue are 10 times more likely to miss course correction signals if intoxicated.[49] After an accident occurs and the operator or passenger is in the water, the effects of alcohol consumption on swallowing, breathing, susceptibility to hypothermia, and susceptibility to inner-ear equilibrium disturbances can contribute to a fatal outcome. Other research has found that boat passengers who drink alcohol also are at increased risk of injury or accidental drowning, regardless of the behavior of the boat operator, because they are more likely to disregard guidelines for water safety, fall overboard, and drown.[50]

14. Increase the percentage of 8th, 10th, and 12th graders who perceive peer disapproval of substance abuse.

14a. Increase to 90 percent the estimated proportion of 8th, 10th, and 12th graders perceiving peer disapproval of having one or two drinks of alcohol nearly everyday. (Baseline: 73 percent in 1995)

14b. Increase to 70 percent the estimated proportion of 8th, 10th, and 12th graders perceiving peer disapproval of trying marijuana (or hashish) once or twice. (Baseline: 58 percent in 1995) (See Tobacco Use chapter for objective on peer disapproval of smoking cigarettes.)

Target Setting Method: 20 percent improvement..

Data Source: Monitoring the Future Survey, NIH, NIDA.

Peer disapproval of substance abuse is inversely related to adolescents' reports of use. For example, multiyear tracking of the results of the Monitoring the Future Survey indicates that the prevalence of marijuana use among youth declines as the percentage of youth expressing disapproval of the drug increases; similarly, an increase in the prevalence of marijuana use among youth during the early 1990s coincided with an apparent decline in the percentage of parents and peers expressing strong disapproval.[51]

15. (Former 4.10) Increase the percentage of 12- to 17-year-olds who perceive great risk associated with substance abuse.

15a. Increase to 80 percent the estimated proportion of youth perceiving great risk from consuming five or more drinks at a single occasion once or twice a week. (Baseline: 45.2 percent in 1996)

Select Populations	**1996**
African American	50.4%
American Indian/Alaska Native	Not available
Asian/Pacific Islander	Not available
Hispanic	49.3%
White	42.8%
Male	42.0%
Female	48.5%

15b. Increase to 80 percent the estimated proportion of youth perceiving great risk from smoking marijuana once per month. (Baseline: 32.6 percent in 1996)

Select Populations	1996
African American	31.6%
American Indian/Alaska Native	Not available
Asian/Pacific Islander	Not available
Hispanic	33.7%
White	32.6%
Male	31.7%
Female	33.6%

15c. Increase to 80 percent the estimated proportion of youth perceiving great risk from using cocaine once per month. (Baseline: 54.4 percent in 1996) (See Tobacco use chapter for objective on perceived risk related to smoking cigarettes.)

Select Populations	1996
African American	58.6
American Indian/Alaska Native	Not available
Asian/Pacific Islander	Not available
Hispanic	50.2
White	54.7
Male	55.5
Female	53.3

15d. (Developmental) Increase the percentage of youth perceiving great risk from acquiring HIV by sharing injecting drug use equipment.

15e. (Developmental) Decrease the percentage of youth who practice unsafe sex under the influence of alcohol or drugs.

Target Setting Method: Consistent with ONDCP.

Data Source: National Household Survey on Drug Abuse (NHSDA), SAMHSA.

The perception of risk in using illegal drugs is an important factor in decreasing drug use. Data have shown that as perception of harmfulness decreases, there is a tendency for use to increase.[53] Therefore, it is important for youth to be informed of the risks of using illegal drugs, alcohol, and tobacco. In the National Household Survey on Drug Abuse, the percentage of youths 12 to 17 years of age that perceived great risk in using marijuana once a month decreased from 40 percent (1990) to 33 percent (1994-96). The percentage of youths reporting great risk in using cocaine once a month decreased from 63 percent in 1994 to 54 percent in 1996. The percentage of youths perceiving great risk in having five or more drinks once or twice a week decreased from 58 percent in 1992 to 45 percent in 1996.[54]

16. (Developmental) Reduce the treatment gap for illicit drugs.

16a. Reduce the treatment gap for illicit drugs in the general population.

16b. Reduce the treatment gap for identified drug-using offenders.

Potential Data Source: *Performance Measures of Effectiveness,* ONDCP.

The treatment gap is conceptualized as the difference between the number of people who need treatment for the use of illicit drugs and the capacity of the treatment system to provide that treatment. Despite the widely acknowledged problem of drug abuse in the United States, widely accepted estimates of the number of persons who need and the number who receive drug and alcohol treatment are not available. An estimate of 7.1 million people reflects those who are in most severe need of treatment.[55] Since this estimate was made, discussions on the subject of the treatment gap suggest that the gap is growing. It is important to note that these estimates, however, do not address the availability of treatment services. Experts in the field of drug treatment are currently working to reach a consensus to better estimate the treatment gap and expand the capacity of the treatment system to provide those in need with treatment.

A great deal of attention has been focused on the link between substance abuse and criminality in part because of the large increase in the number of individuals incarcerated for drug-related crimes such as drug possession, drug trafficking, crimes of violence, and other drug-related activities. Research generally shows that criminal offenders have high occurrences of a substance abuse history and may or may not have previously received treatment. Further, the correlation between substance abuse and criminal behavior is underscored by several studies that have linked this abuse with greater likelihood of committing a criminal offense.[56]

17. (Developmental) Reduce the treatment gap for problem alcohol use.

For those completing alcohol abuse/dependence treatment programs:

17a. Decrease the problematic use of alcohol.

17b. Increase the number of persons in full-time employment (adults in the labor force).

17c. Increase the educational status of adolescents.

17d. Decrease illegal activity (e.g., DWI, alcohol-related violence).

17e. Increase general medical health.

According to the *Ninth Special Report to Congress on Alcohol and Health,* problem drinking can be determined by using an 11-item scale to assess frequency of drunkenness, frequency of high-volume drinking (five or more drinks per occasion), and the number of negative personal and social consequences due to drinking in the past 6 months. Access to clinically appropriate and effective treatment for alcohol problems, however, is limited.[57,58] The exact size of the gap between services available and needed is not yet well defined and baselines need to be determined.[59] It is, however, known that not all who wish to receive treatment for alcohol problems are able to receive the treatment of their choice[60-63] and that there is a wide variability among jurisdictions in total treatment capacity and in how that capacity is distributed among settings and modalities.

Recent research is finding that alcohol problems may have an indirect effect on employment by way of effects on such mediating variables as educational achievement and marital status. Some of the effects of problem drinking on labor market outcomes are channeled through covariates, including such important components of human capital as schooling attainment, work experience, health status, and family structure.

By 2002, as part of its System for Assessing the Performance of the National Drug Control Strategy, ONDCP will establish a national treatment outcomes monitoring system (NTOMS) to track the effectiveness of substance abuse treatment. The NTOMS will also cover treatment for alcohol problems, medical problems, employment/financial problems, illegal activity, family/social problems, and psychological problems among substance abusers. The measures used by NTOMS should be comparable insofar as possible with key national research studies and with measures in common use by State substance abuse agencies and providers. Health, welfare, and crime costs before and after treatment will be determined by established cost-finding methodologies.

18. (Developmental) Increase the number of primary and secondary school-age children with substance abuse problems or who live in substance-abusing households who receive screening, prevention, referral, or treatment of these problems as needed.

Potential Data Source: School Health Policies and Programs Study (SHPPS), CDC, NCCDPHP.

For populations most at risk for future addiction, including young children with chronic mental disorders and children raised in substance-abusing households, an effective means of preventing early use may be selective preventive intervention at a young age.[64] Most school-based social influence programs have little effect on future drug use.[65] For this reason, communities must make appropriate investments to identify children at high risk for severe substance abuse and mental health disorders and provide intensive services that reduce the risk. Several programs involving one-on-one counseling, small group sessions, and family intervention have documented promising results.[66-68]

Research has demonstrated that children of drug-abusing parents, in particular drug-abusing mothers, are at greater risk than their peers for alcohol and drug use, delinquency, and poor school performance, as well as depression and other psychiatric disorders. Studies have shown that parents who abuse drugs tend to provide inadequate nurturing and guidance and tend to serve as maladaptive models of coping skills. Professional counseling has proved effective in reducing behavioral problems associated with being a young child in a substance-abusing family.

The potential benefits of child and adolescent counseling do not end after a parent enters drug treatment. The family dynamic often changes radically as a result of the new behaviors of recovery. For example, a child who has developed emotional and behavioral defenses to cope with the inconsistent parenting of a drug-abusing parent tends to continue using these mechanisms after the parent has achieved abstinence and health. The conflict between the newly recovering parent's expectation of a "normal" relationship with a child and the other family members' continued use of defense mechanisms can result in severe emotional and psychological stress. Recognizing these issues, many publicly funded programs now provide access to at least brief counseling for children whose parents enter addiction treatment. Part of the intent of this objective is to further improve access to these services.

Interventions for children with diagnosed mental health problems also need to address co-occurring substance abuse and mental health disorders. Kessler[69] contends that 89 percent of people suffering from co-occurring disorders had the mental health problem first, in childhood.

19. (Developmental) Increase the proportion of primary care providers who monitor and screen

patients 60 and older for alcohol and drug abuse, discuss alcohol and prescription drug interactions with these patients, and refer them for preventive or treatment services, if necessary.

Potential Data Source: Primary Care Providers Survey, ODPHP.

Substance abuse, particularly with alcohol and prescription drugs, too frequently goes undetected among adults over 60, a rapidly increasing segment of the population. It is reported that the misuse of drugs affects 17 percent of older Americans.[70] In addition, 15 percent of male alcoholics report that their first symptoms of alcoholism occurred between the ages of 60 and 69. For women, the percentages are even higher, with 24 percent reporting their first signs of alcoholism between ages 60 and 69. Twenty-eight percent report their first signs occurred between ages 70 and 79. Prescription drug misuse and abuse are prevalent among older adults, as well, not only because more drugs are prescribed to them but also because, as with alcohol, aging makes the body more vulnerable to drug effects. Studies conclude that an overall increase in alcohol problems throughout the population, coupled with the aging of the Baby Boomers, suggests that the number of older Americans with alcohol- and drug-related problems may increase during the early 21st century.[71]

20. (Developmental) Decrease the cost of lost productivity in the workplace due to alcohol and drug use.

In 1992, the cost of alcohol and drug abuse was estimated to be $246 billion in the United States. Alcohol and alcoholism were responsible for 60 percent of these costs; of this 60 percent, two-thirds was due to lost productivity. Drug abuse and drug dependence accounted for 40 percent or $98 billion of the overall cost. For drug abuse, more than half of the estimated loss is for drug-related crime, including loss of productivity of victims and of incarcerated perpetrators of drug-related crimes, lost legitimate production due to drug-related crime careers, and other drug-related crime costs. Most of the remaining cost of drug abuse resulted from premature deaths, lost productivity, and health care expenditures (NIDA and NIAAA, May 13, 1998 media advisory; cost estimates are for 1992, adjusting for inflation gives a 1995 estimate of $276 billion). Losses in productivity in the workplace can also be attributed to lost time and ability to do work by those who are injured on the job due to the victim's or perpetrator's substance abuse impairment; and by turnover rates, absenteeism, and poor quality of work attributable to substance abuse.

Worksite alcohol and drug policies and education programs are a key way employers can communicate the deleterious effects of substance abuse in and out of the workplace and support a culture that promotes healthy behaviors. A Healthy People 2000 objective calling for the adoption of worksite alcohol and drug policies, which contributed to over 90 percent of worksites adopting such policies, helped advance this trend in public and private workplaces, which has been noted by the Institute of Medicine (IOM) and ONDCP.

21. (Developmental) Increase the number of communities using partnerships or coalition models to conduct comprehensive substance abuse prevention efforts.

21a. Increase the number of schools that use community-based collaboration models and report that their substance abuse prevention programs involve parents and families and are integrated with a diverse cross-section of broader community wide resources, including people, programs, and other supportive policies and efforts.

21b. Increase the percentage of schools (public, private and alternative) that provide age-appropriate primary and secondary school science-based programs on substance abuse prevention to students, which are preferably a part of school health programs.

Potential Data Sources: School Health Policies and Programs Study (SHPPS), CDC, NCCDPHP; Community Partnerships Data, SAMHSA.

A comprehensive program of interventions at the community level is crucial to effective prevention.[72,73] The comprehensiveness enables communities to attack the community's environment, not just its at-risk populations. Improving the environment means changing local ordinances and policies; coordinating local prevention services; increasing resident participation; communicating with the local media on how it portrays local communities; and addressing numerous other conditions. The comprehensiveness emulates the essence of the public health model, dealing with environment, host, and agent simultaneously. A cross-site evaluation of comprehensive community partnerships has begun to suggest their general effectiveness and has pointed to successful partnerships in Springfield, Missouri; Lake County, Illinois; El Paso, Texas; three rural counties in Kentucky; and South Central Los Angeles, California.[74] Other specific partnership successes have been reported by other investigators—e.g., in Gloucester, Massachusetts;[74a] Pasadena, California;[74b] the inner city, South Central partnership mentioned above;[74c] and a Native American reservation.[74d] Because of the diversity of the Nation's communities, no single partnership model can be expected to be found. However, desirable procedures and practices, such as how a community should get mobilized, are now being promoted (e.g., CSAP, 1997).[74e]

Most schools have placed substance abuse information into a standard curriculum. Controlled studies of the effects of substance abuse education in secondary schools have found significant prevention effects for programs that focus on life skills, resistance to pressures to engage in risk-taking behaviors, and the provision of accurate information about social norms, expectations, and behaviors regarding substance use. Multiple research projects have found that one of the most effective curriculum components reinforces knowledge that most youth do not use drugs or tobacco and that most adults do not frequently consume alcoholic beverages. School-based tobacco prevention programs that identify the social influences that promote tobacco use among youth and that teach skills to resist such influences have demonstrated consistent and significant reductions or delays in adolescent smoking.[75-81] Education programs addressing older youth have shown good results by incorporating substance abuse prevention into general wellness programs in school, at worksites, and in health care settings.

22. (Former 4.15) Extend to all States and the District of Columbia Administrative License Revocation (ALR) laws, or programs of equal effectiveness, for people determined to drive under the influence of intoxicants. (Baseline: 41 States and the District of Columbia in 1998)

Data Source: National Highway Traffic Safety Administration, Department of Transportation.

Administrative License Revocation (ALR) is the prompt, mandatory suspension of the driver's license for failing an alcohol or drug test or refusing to take a test. ALR has proven to be a successful deterrent to driving while under the influence of intoxicants. ALR laws provide for administrative action separate from the judicial process that follows when a person is arrested for driving under the influence of alcohol or drugs. As of 1997, 40 States and the District of Columbia had adopted some form of administrative license revocation. Illinois, New Mexico, Maine, North Carolina, Colorado, and Utah observed significant reductions in alcohol-related fatal crashes following the implementation of ALR laws. A 1991 study examined the costs and benefits of the procedure and found that reinstatement fees assessed to offenders more than covered the expenses of the program and that States also benefited from the cost savings of

fewer nighttime crashes. An independent study found that ALR reduced fatal crashes an average of 9 percent during late night hours, when drivers are most likely to be under the influence of alcohol. This rate increased when a publicity campaign was used to inform the public about ALR.[82]

23. (Former 4.18) Extend to all States and the District of Columbia maximum legal blood alcohol concentration (BAC) levels of 0.08 percent for motor vehicle drivers aged 21 and older.
(Baseline: 16 States in 1998)

Data Source: National Highway Traffic Safety Administration, Department of Transportation.

More than 80 percent of the drivers involved in fatal crashes had BAC levels exceeding 0.08.[83] An average man weighing 170 pounds must consume more than four drinks in one hour on an empty stomach to reach a 0.08 BAC level.[84] Most States that have enacted 0.08 BAC legislation experienced significant decreases in alcohol-related fatal crashes. For example, a 12 percent reduction in alcohol-related fatalities occurred in California in 1990, the year 0.08 legislation and an ALR law went into effect.[85]

As of August 1998, 50 States and the District of Columbia had established BAC cutoff levels of 0.00, 0.01, or 0.02 to define driving under the influence for individuals under the age of 21. A zero tolerance law makes it illegal per se for drivers under the age of 21 to drive with any measurable amount of alcohol in their blood. Because young drivers place such a high value on their drivers' licenses, the threat of license revocation has proved to be an effective sanction for this age group.[86]

Related Objectives From Other Focus Areas

Tobacco Use

- 1 Adult tobacco use
- 2 Cigarette smoking during pregnancy
- 3 Adolescent tobacco use
- 4 Age at first use of tobacco
- 5 Adolescent never smokers
- 6 Smoking cessation
- 7 Smoking cessation during pregnancy
- 8 Smoking cessation by new mothers
- 9 Smoking cessation attempts among adolescents
- 15 Worksite smoking policies
- 18 Retail license suspension for sales to minors
- 19 Adolescent disapproval of tobacco use
- 20 Adolescent perception of harm of tobacco use
- 21 Tobacco use prevention education
- 22 Cigarette price increase
- 23 Tobacco product price increase
- 24 State tobacco control programs
- 25 Preemptive tobacco control laws

Educational and Community-Based Programs

- 2 School health education
- 3 Undergraduate health risk behavior information
- 5 Worksite health promotion programs

Injury/Violence Prevention
11 Motor vehicle crashes
13 Nonfatal motor vehicle injuries
14 Pedestrian injuries
21 Smoke alarms
24 Drowning deaths

Access to Quality Health Services
A.3 Routine screening about lifestyle risk factors
A.5 Training to address health disparities
D.2 Primary care evaluation

Maternal, Infant, and Child Health
17 Low birthweight
21 Alcohol use during pregnancy
22 Tobacco use during pregnancy
23 Drug use during pregnancy
24 Fetal alcohol syndrome
25 Prenatal exposure to teratogenic prescription medications

Cancer
9 Provider counseling about preventive measures

Disability and Secondary Conditions
10 Compliance with Americans with Disabilities Act

HIV
5 HIV counseling and testing for injecting drug users
13 Treatment for injecting drug use

Mental Health and Mental Disorders
1 Suicide
4 Mental disorders among children and adolescents
13 Primary care provider assessment of mental health of children
16 Children's access to mental health services
22 State plans to address co-occurring disorders

Resources

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